

Note Book.

Sept. 12 - Sept. 30, 1930

W. J. Morse.

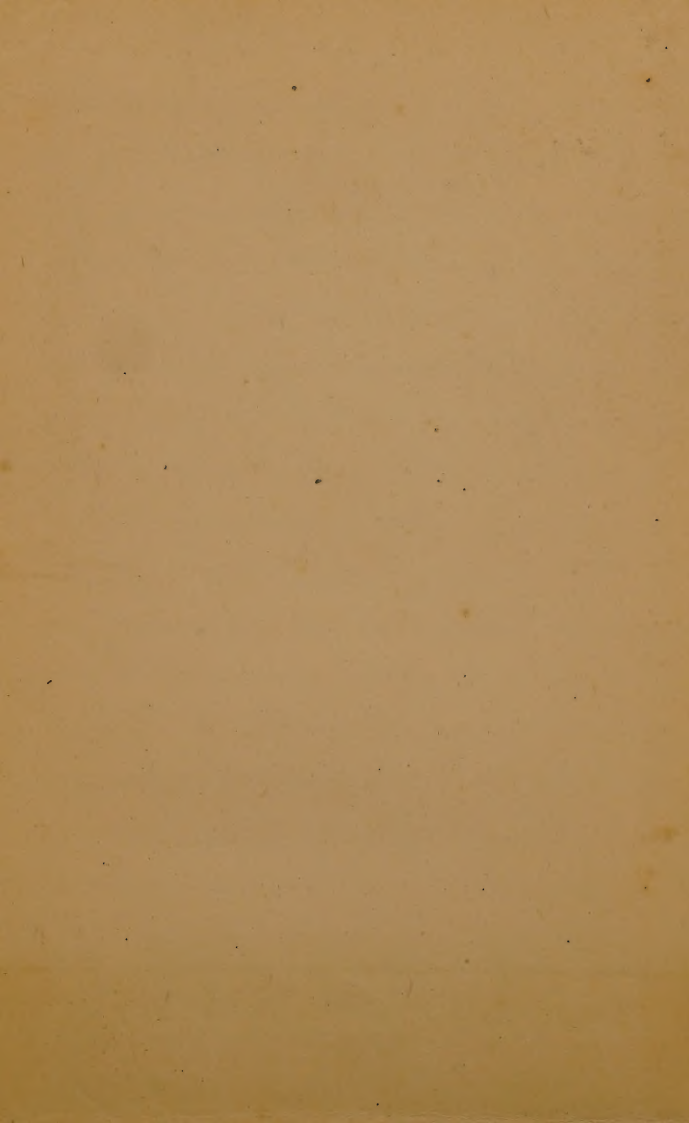
U. S. Dept. Agr.

Washington, D. C.

Agr. Notes.

Chosen.

~~written up~~



that appear to have
any promise for forage
or green manure.

We called also at the
Agr. Soc. office with re-
gard to wild alfalfa
and were told that the
alfalfa in the region
north of Chiriquito
was introduced many
years ago and had
escaped cultivation. It
is a purple flowered
hardy form.

After lunch we
crossed the Daino
river, and visited the
Army airport station
to observe the grasses
on the air field. No
special study was

been made of the most
suitable grasses. The
field is a sod of water
grasses, Zoysia pungens
grows quite extensively
on parts of the field and
makes an excellent sod.

One of the officers advised
that the Tokyo airport
in Saitama Prefecture is
making a study of the
grasses most suitable
for a sod.

The officer said we
might be interested in
visiting the Keigo Golf
Club about 20 miles dis-
tant as they were using
Zoysia pungens on the
greens.

On going to the Golf
Club we passed thru

a farming where there
many soybeans grown
along and in mixed
plantings - the latter
principally with Kasha
and corn.

We found the Grass
Club located in rather
a hilly section and
apparently an old
Korean graveyard as
mounds seemed to be
located over nearly the
entire course. Perhaps
they are used as
markers. The greens
were all sodded with
Zoysia japonica, var.
japonica. This grass
is far from an ideal
one for a green, it

makes rather a rough
green and would be
much more suitable
for fairways. For fertilize
a compost of soil and
manure is used.

Just before reaching
the golf course we found
in a small section
considerable *Trifolium*
lupinaster which
is in full bloom. The
seed will not be mature
before October. In a
small depression we
also found a small
growing (18-28 in.) species
of *Hemerocallis*. The seed
has been mature for
some little time.

In the forming section
in Jidori country

adzuki and mung
beans are grown. For the
first time we observed
a field of upland rice
with adzuki beans
mixed in.

We were given seed of
an early wild yetch and
seed of a wild alfalfa
by Mr. Lutz of Union
Christian College.

W

Saturday - Sept. 13, 1930.

Cloudy and cool.

Left Kiyo — 9.30 A.M.

Arr. Ryugyō — 10. A.M.

The Koreans feed their hogs any time in the summer. The beans are soaked in cold water and in the winter the beans are boiled. Each hog receives $\frac{1}{2}$ lb. to per day. Principal hog food is wheat, all sorts of grain with soy sauce. The hogs also receive mash of soy sauce and hoeku.

We left Kiyo at 9.45 with Mr. Yamazaki, animal husbandryman of the Co. Agr. Office to look over dilage practices in some Korean villages in the vicinity

Lf. Ryugo — 3.18 P.M.
An. Uno King — 3.38 P.M.
of Ryugo.

I'm going from one village to another we collected seed of a wild white rose, vetch, iris and wild adzuki. We also found some plants of *Trichia nipponica* which we had not found in other sections.

The Agr. Soc. began the system of establishing silos in Korean villages, one to each village in 1929. In that year five were placed about and this year 35 more were built. The Society pays 20 yen to aid the

farmer in building
the silo and has an
expert to aid in the
construction. The silos
are 6 feet deep, extending
about 1 foot above ground,
5 feet in diameter and
the wall 4 in. thick. Such
a silo holds about
6000 lbs. of silage which
is sufficient for one
ox three to four
months. Corn, alfalfa
mixed with legumes,
grasses and weeds have
been ensiled thus far.
Three 5 inches of the silage
spoils at the top. A board
cover is placed on top
of the silage and stones
weighing a few hundred
pounds are placed on

The corn. One of the
silos was open and the
silage a little dry was
in very good condition.
There is a tendency for
the Koreans farmers to
cut the silage material
too late, as they desire
the corn for food, it is
not cut until mature
and only the dry stalks
are used for silage. Salt
is added at the rate
of $\frac{1}{2}$ lb. to every hundred
pounds of silage material.
The farmers have had
good success with the
silage and many more
will be built the coming
year. Soy beans and
corn are to be tried
out this next season.

Sunday. Sept. 14, 1930,
Heiyo-Chosen.

Cool and clear. In the morning check up plant and seed material to see if all were numbered. Thus far 133 numbers of seed and plants have been collected since we came to Chosen.

After lunch we went down to the Botandai section to see if any legume seed was mature. The vetch which is so common is now beginning to mature. All ^{other} of the legumes are past flower and hardly will mature.

mature seed before
October. We visited
several of the hill
sections. Some wild
adsuki beans were
found with ripe seed.

We then went to the
Saido River and
took one of the boats
up the river to the
Saidomura gate.

Monday. Sept. 15, 1930.

Cloudy and cool.

Left Heijo 9.30 A.M.

Arr. Rikiho 9.52 A.M.

Left Chirwa 2.45 P.M.

Arr. Heijo 3.20 P.M.

Left this morning for Rikiho to collect seed and plants between this station and Chirwa. Just outside of Rikiho we found a wild itch with mature seed. This species we have noted abundantly on all of our trips but the first time we have found ripe seed. In the farming sections between Rikiho and Chirwa nearly all of the *Dracopis* dies

Bean harvested and
much of it threshed and
cleaned. About 50% of the
harrowing has been harvested.
This is just in large
shocks and allowed to cure
in the field.

We were able for the first
time to find ripe seed
of a *Cassia* sp. which
is found everywhere
and makes an excellent
growth on rather poor
soil.

Several sections were
found where there was
considerable wild mung
bean seed. The plants
were badly affected with
leafspot.

We found in a
small patch of the

annual lespedeza
a rather interesting
form of dodder (*Cuscuta*)
which we have not
observed before.

Arriving at Chumun
we found that it was
Korean market day so
we visited the grain
section. Here barley
seed and wheat pre-
dominated among the
grains. There were some
adzuki and mung
beans and very few
soybeans. Considerable
seed cotton is being
brought in. In the
vegetable section sweet
potatoes of two or three
varieties were most
in evidence. In the
fruit section apples

of several kinds were
hauled and a few
varieties of very poor
peaches and pears.
There were a few wild
grapes similar to the
ones purchased in Herjo
recently.

After visiting the market
we made a trip beyond
China westward but
had not gone very far
when it began to
rain halting our ex-
plorations the day.

Tuesday - Sept. 16. 1930.
Keigo. Chosen.

Clear and cool. In the morning went to the Ritsuri Section to look up legumes and soybeans. We visited a hill section that we had not explored before.

Some excellent truck gardens were seen which for the most part had Chinese cabbage, radish, peppers and onions.

We found *Cassia* in abundance on the poor hillsides with mature seed. *Trifolium lupinaster* was also found in great abundance and

we found some ripe
seed. Much of the seed
should be mature
within the next ten
days.

In one section about
an old Korean graveyard
we found considerable
ripe seed of a *Hemerocallis*
sp. said to have a
lemon yellow colored
flower.

Many of the Cuscutas
are now beginning to
mature seed and we
should be able to collect
fair amounts of seed
of several species within
the next week.

We found one field
of kaoliang (Susu)
which had ripe

a different head from
any variety we have
seen. Seed was collected

Throughout the farming
section we saw many
excellent fields of vetch.
For the most part the
plants were beginning to
yellow and in two or
three fields the leaves
had fallen. All of the
fields were in 21 in.
rows and from the
appearance of the plants
the yields should
range from 15-25 bus.
per acre.

Trifolium lupinaster
was found throughout
the hill sections and
makes a very good growth
on poor soils. Because

of the low growth. This
species might be of value
in a pasture mixture.

Wednesday-Sept. 17. 1930.
Heigo. Chosen.

Clear and cool. In the morning wrote letters to Hackleman, Dorsett and Morrison.

Parcel Package #220 was sent to the Dept. and consisted of about 8 lbs. of Zizia seed collected by a Korean in the vicinity of Heigo.

Eighty-nine $3\frac{1}{4}$ - $4\frac{1}{4}$ ~~prints~~ and 12 panoramic negatives were sent to Dorsett for the annual report. In addition the daily report from Aug. 17 to Sept. 15 inclusive was also sent.

Left Heigo at 2.31 P.M.
Ar. Heigo at 8.50 P.M.

In the Shariin region
many fields of soybeans
were noted to be about
fully mature as the beans
had all fallen.

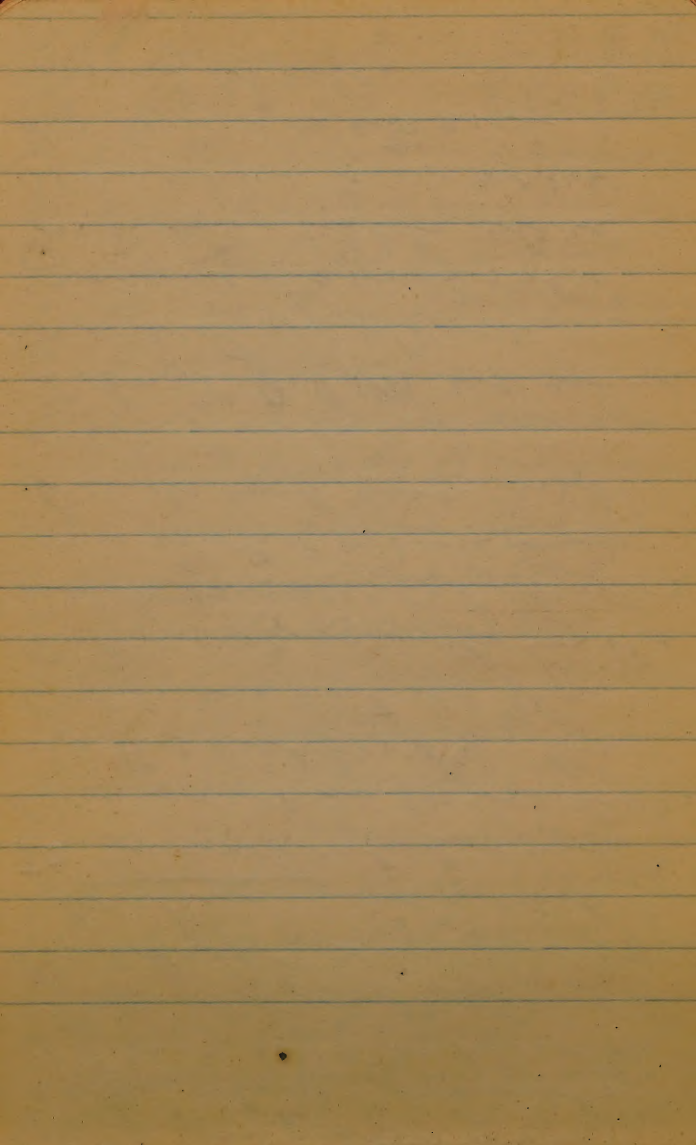
Below Shariin some
excellent fields of soybeans
were seen alone. Millet
& soybeans are most
generally grown. The
hills of soybeans seem
to be at no regular
distances apart for
they vary anywhere
from 4 to 20 feet apart
along the millet rows.

They average perhaps
about 8 feet apart.

Buckwheat is quite
extensively grown but

very few fields were
seen along. Generally
the crop is grown with
other crops or around
the edges of bean fields
Sorghum is about
75% harvested and
arranged in large stacks
in the fields. The
heads are cut off the
stalks apparently in the
fields for several stacks
were noted where the
heads had been cut
off.

About 7 P.M. we came
to a section where
grazing is cultivated
for many fields were
seen where there were
the low rice straw
covered sheds.



Thursday - Sept. 18. 1930.
Seigen, Korea.

Cool and clear.

Left Keijo 7.30 A.M.

Arr. Seigen 8.40 A.M.

Dr. Nagai - Seigen, Korea

Balea seed - 4 lbs.

Austrian Winter Pea - 4 lbs.

Left Seigen 5.24 P.M.

Arr. Keijo 6.20

Went at once to the
Seigen Paper Sta. where
we met Dr. Nagai in
charge of the Plant Breeding
work.

Soybean work at this
station consists
of developing pure strains
of native varieties by
selection and hybridizing
and also variety tests.

of Japanese, Korean and Manchurian varieties. This season they have only 80 varieties under test, there having been selected from 1000 strains and varieties for further work.

We were taken out to the experimental plots by Dr. Nagai first to the variety plots. The Chotan variety is now mature and looks very promising. It is used as check. The Ussan, a native Korean variety is an excellent variety later than the Chotan. Some excellent varieties were seen, a few Japanese sorts but mostly native

Korean varieties

Dr. Nagai received a full set of named varieties from the U.S. Dept. Agr. Office of Forage crops the past spring. These varieties were grown in 2 rod rows. All were showing up exceptionally well. The Harbinsay (54806) placed in U.S. farmer's hands in 1927 looked to be one of the best and was highly spoken of by Dr. Nagai. The early varieties such as Misc. Blackie, Murdamin, Saynotu are too early. The varieties ranging from 115-135 days maturity were the best. breeding.

In the experiments given to purifying

The native Korean varieties, individual selections were made last year and grown this season. The rows were about 30 inches apart and the plants 8 inches apart in the row. In this work Dr. Nagai tries to have 50 plants of each number. The seeds are dropped 8 inches apart so there is no thinning to do. There were many very promising looking types, mostly grain sorts.

After looking over the various soybean experiments, we went to the farming section west of the station. We were welcomed by Dr. Nagai.

that from Keijo southward
the methods of culture
of crops varies considerably
from those north of Keijo
not so much kaoliang,
millet or buckwheat is
grown. In visiting this
farming region and also
another later in the after-
noon to the southeast of
Singen. We saw sun,
soy beans, and perilla,
soy beans, millet and
sun. Contrary to the
methods in mixed plant-
ings in Manchuria and
North Korea where corn
or millet or sun predom-
inate in the mixed plant-
ing. In the Singen section
and southward soy beans
predominated in the
mixed plantings. Not

so many adzuki beans
and mung beans were
noted in the sections
today as in North Korea.
No mixed plantings
of buckwheat and beans
were noted. All the plant-
ings of field crops are
planted in beds three to
four feet wide. In the
planting of Susun, soy-
beans and millet, the
soybeans are planted
first, after barley harvest
about the 20th of June. The
beans are planted in
hills (4-6 plants per hill),
four across the bed 8-12
inches apart. Sorghum
plants about 24-30 inches
high are transplanted
in the middle of the

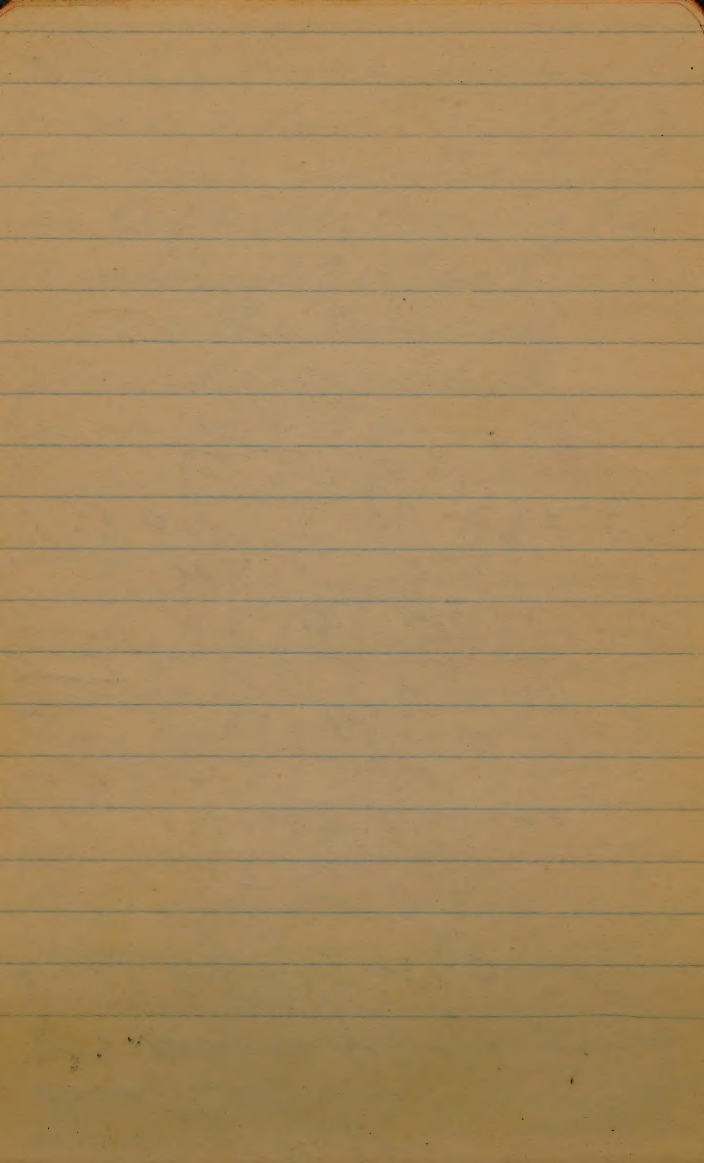
beds at intervals of
about 8 feet - about 4-5
runner stalks per hill.
Hills of millet are planted
inidway the runner hills
about 4 to 6 millet stalks
per hill. In many
fields, perilla was
used in place of the
millet. Also in many
fields a bed of perilla
was planted entirely
about the mixed field
plantings. Several fields
of buckwheat were noted
and all were planted
on beds.

Wheat is sown in
October, then following
the wheat (after harvest
soybeans alone or in
mixed plantings are
planted out (the latter

part of June. When
melons or cotton follow
the next year the land
is left idle during the
winter. If wheat is to
follow the land is
plowed in ridges about
21 in. apart and wheat
is sown the forepart of
October in the furrows.
On the rice disease
work, Dr. Nagai gave us
a new thing which
they had discovered in
the study of the rice
plants. It was found
that the highly resistant
plants had the least
number of stoma in
the leaves while the
most susceptible plants
had the largest number

of storma. There is a
direct correlation between
the number of storma
and the degree of resistance.
No discovery was made
in the study of the rice
plant blast disease.

In the yields of soy-
beans. Dr. Nagai said
that soybeans in which
sown on the other
mixed plantings
yield from 16 - 20 bu.
per acre



Friday - Sept. 19, 1930.

Seoul (Keijo, Korea).

Clear and cool. In the morning we first visited the large center Korean market to look over the grain, vegetable and fruit markets. The following were noted in the vegetable line:

Radishes, crown daisy, spinach, Chinese cabbage, mushrooms, peppers (green & red), soybeans and mung bean sprouts, fern shoots, green vegetable soybeans, green pea pods, string beans, asparagus beans, squash, tomatoes, sweet potatoes, white potatoes, egg plants, cucumbers.

In the fruits: pears, apples, persimmons, grapes, jujubes, chestnuts, pine nuts.

In the grain markets,
soybeans, millet, adzuki
beans, mung beans, and
sorghum.

We found that persimmons
were just coming on the
market in great abundance.
There are several varieties.

We found more varieties
of soybeans but found
only one of interest, a very
small round yellow
which should be excellent
for sprouts. The r

The east and west markets
were also visited and about
the same lines of products
were noted.

A short visit was made
to the Royal Botanic
Gardens and although
we went over it quite

completely new found
practically no seed. One
iris sp. was found with
mature seed which is
said to be a large yellow
flowered variety.

Vegetable market.
burdock roots.

Saturday, Sept. 20, 1930.
Keijo (Seoul), Korea

Warm and clear. In the morning we went to the American Consulate where we met the Vice-consul, Mr. Stephan. We had the August expense account shown to.

We left about 10 AM by street car and then took a bus to Tokkosa. This is in a valley and surrounded in the background mostly truck crops are grown - especially radish and Chinese cabbage. Several fields of burdock were seen. Buckwheat in fields (small) were noted to a considerable

and field
extent. all truck crops
are grown on raised
beds about 12 in. high
and from 3-4 feet wide.
Upland rice beds varied
from 6-10 feet in width.
On the hill lands
we found soy beans
planted with corn
and pecanilla or rather
these crops with the soys.
We saw many fields
rather small planted
to peppers and soys
the soys were planted
between the pepper
beds and on the edges.
Several small fields
of upland rice were
also seen with soy-
beans between the
beds and along the

outer edges.

Proceeding up the valley we found the land sandy and poor. Some fields of mature adzuki were noted and also a few fields of soy. A few rays were seen planted on the edges of rice paddy fields. Very few fields of millet were seen and also very few fields of sorghum (kaoliang). At the lower end of the valley the land was given mostly to paddy rice that is about Senyori.

We caught a bus back to Hsiao and after lunch took a street car to Rongyoshin^{shin}, and after crossing the river went

and in the hill and
farming sections. Not
many legumes were
found. However, a species
of Lotus was found along
the roadside which we
have not seen in China
before. It makes an ex-
cellent growth but the
seed has been mature some
time and we had difficulty
in collecting even a small
sample. Not many species
of legumes were noted. The
Lotus sp. was not very
abundant. The wild adzuki
was seen to some extent and
cassia sp. was very abundant.

Some excellent gossypia
seed was noted, along
the steep sides of a
railroad embankment

gorpina soil had been
transplanted. This grass
seems to be an excellent
one for growing on steep
embankments.

In one field we saw
cotton, perilla & soybeans.
A little sesame was noted
about in mixed plantings
and in a few cases, some
had been harvest and
standing in small shocks
to cure. The plants had
been pulled. A few
small fields of cowpeas
were seen and cowpeas
about the edges of other
fields were seen. The
peas were of the brown
eye type.

Sunday - Sept. 21, 1930
Keijo To Keijo. Chosen.

Warm and clear

Left Keijo (Seoul) at 9.05 A.M.
Arr. Keijo (Pekingyang) at 3.06 P.M.

Postage 174

Above Kinkon - 24 in. rows

Soybeans & Millet

24 in. rows, soybeans on ridges,
millet in furrows.

Soybeans & Buckwheat

24 in. rows, soybeans on
ridges, Buckwheat in furrows.

Soybeans & Castor Beans

24 in rows, soybeans on
ridges, 1 castor plant every
20 feet side of soybean row.
Many soybeans grown
in fields alone. In nearly
all fields the beans are
yellow. Millet has all
been harvested and

much of the Psalms although
these crops do not appear
to be grown as extensively
as around Heryo and
northward in Korea.

In many of the fields
of soybean and millet
Korean men and women
were cutting the soybean
plants if the leaves were
yellow & but few fallen.

The fields were being made
ready for sowing barley.
In several fields the land
was being plowed and
barley sown.

Where the soybeans are
mature before barley is
sown, the seed is saved
for cattle feed. The immature
plants are fed green to the
cattle.

Monday, Sept. 22, 1930.
Heijo, Chosen.

Cold and clear. Raining
in the morning so
wrote some letters, also
threshed out and cleaned
seed.

After lunch went out
to the Prefecture seed &
Nursery Farm. On the way
we found the wild soybean
mature along the road-
sides so collected a small
bag of seed.

At the S. Y. N. Farm we
met the director Mr. Shira-
mura and asked concerning
the harvest of soybeans in
this prefecture. He thought
that we would have a
better chance of seeing.

harvest scenes near Jinsen
which is in a mountain
region and soy beans are
grown in fields by them-
selves.

In the harvest of soy beans
by Korean farmers, the plants
are in fields to themselves
left until fully mature.
The plants are harvested
with a sickle (short knife
or blade on wooden handle),
and the plants are broken
by the blade rather than cut
off. When planted with
wheat the plants are
cut if the field is needed
for barley or wheat, before
the plants are fully mature.

1 film stock —	60
12 prints - $3\frac{1}{4} \times 4\frac{1}{4}$	120
3 " " 10 x $8\frac{1}{4}$	60

Such plants are used for
cattle feed and also are
used and sold as green
vegetable beans,

We visited a bean curd
factory run by a Japanese
and who in addition to
advertising bean extra
fine quality of bean curd
also advertised a fine
quality of soy bean milk.
We found that he makes
rather a thick milk
using less water than the
ordinary bean curd
factories. Otherwise the
milk and bean curd
are made the same as
on the main island. This
factory had two stone
mills running and uses
from 4-5 bushels of

soybeans a day. In addition to the fresh bean, fried bean is sold.

Soybean milk is sold principally during the hot weather, late spring, summer and early fall. About 5 gallons of milk are sold per day all to Japanese.

The milk sells for 4 sen per bottle (5 bottles to a quart). The owner advised that there is a soybean milk factory in Keijo. Mr. Lutz told us that one of the nurses in a missionary college at Keijo used soybean milk for babies (Korean) and recommended its use to Korean mothers.

Tuesday - Sept. 23, 1930.
Ritsuri - Heigo - Chusen.

Cold and clear.

In the morning we
left for the hill region
and also farming sections
of the Ritsuri region to
collect wild legumes and
to see if we could get
soybean harvesting scenes.
On the way we found
the farmers busy cutting
Kashang (sueu) and
stacking or shocking it.
Several fields of soybeans
were seen nearly mature.
We found one field that
had been cut yesterday.
The farmers were busy
tying the plants in
bundles and hauling by
ox cart to the farm.

The beans are cut out
day and hauled the next
day. In the course of our
walk we saw some fields
of beans that had been cut.
But none that were being
cut.

In several fields, women
and boys were gicking
wining bean pods. Many
fields of wining beans and
bracketed were seen
and most of the wining
beans were mature.

At lunch time we were
near a field of soybeans which
was being cut. The farmers
had built a fire, and
placed plants of green
soybeans on it. They
were eating the roasted
green beans for lunch.

On the hill region we
found many legumes
native since our last
visit in this region.
The following seed was
collected.

Lupediza striata
L. virgata
L. tomentosa
L. bicolor
Trifolium lupinaster
Eragrostis sp.

On the farming sections
seed of three varieties
of soybeans were collected
and one of native Korean
cotton.

Along the roads, carts
were met going to Market
Day at the Daidomon
gate. Each cart had a
bundle of green soybean

plants with the leaves
turning yellow. These plants
are used for cattle feed.
Several carts had bundles
of plants which were being
taken to market as green
vegetable soybeans.

Wednesday - Sept. 24, 1930.

Junseu - Korea.

Left Heigo ad	9.31 A.M.
Arr. Junseu	11.50 A.M.
Left Junseu	2.06 P.M.
Arr. Heigo	3.58 P.M.

Cold and clear. Left on the morning train for Junseu which is one of the leading soybean producing sections of the Heianwado prefecture. Near Shaniyo and beyond we saw farmers cutting the soybean plants in the millet-soybean fields. The soybean plants were not fully mature, having green and yellow leaves. The plants were being removed for fitting the

land for barley or wheat.
From Shuang to Jinsen
many fields were being
plowed and planted to
barley or wheat. These grains
are sown by hand and
dropped in hills along
the side of the ridge made
in plowing. The holes for
planting are made by the
hills and the grain covered
with the feet.

Toward Jinsen we began
to see more soybean fields
and not so many mixed
plantings. Some few fields
of perilla, soybeans, and
susu were noted. More
perilla was noted in
the Jinsen region than
in sections about Heigo.
No perilla has been

harvested. Some beans
was noted but all has
been harvested and curing
in small shocks.

At Jinsen we went to
the Village Agr. Society and
met the director Mr.
who advised that the region
about Jinsen grows soybeans
and quite extensively. The
principal variety is the
Heigo. From 70-80 per cent
of the beans grown are of
improved varieties. The
Ubiarkon is also grown to
quite an extent. Although
these varieties are excellent
appearing seed, the seed
is not well liked by the
miss. soysauce and tofu
makers on the main
island on account of
the thick skin of these

varieties. Native variety
seed brings a higher price.
The general rotation practiced
by the farmers is millet
with soybeans followed by
wheat and the next year soy
beans. Millet is sown about
the middle of May on ridges
and hills of soybeans sown
along millet ridge about
2 weeks later. About Sept. the
millet is harvested and
the soybeans the latter part
of Sept. The ground is
plowed and fertilized with
compost soil, and then
wheat or barley sown on
ridges 21 in. apart. The
wheat or barley is sown in
hills. About the middle of
May of the next year soybeans
are planted between the

hills of wheat. From 2 to 3
weeks later the wheat is
harvested and the soy beans
have full possession of the
land. After the harvest of
the soy beans from the
15 to 31 of Oct. the soy beans
are harvested. The land
is left fallow until the
next May, when wheat
is again sown.

Soy beans yield, that is
the improved varieties like
the Heigo from 16-20 bus.
per acre. Native varieties
yield anywhere from
10-16 bushels per acre, tho
in some cases from 15-20
bushels per acre.

The soy bean fields are
ready for harvest. In
general, fields are not

ready before the middle
of October in this section.
The first frost occurred
last night but was light
and did no damage. This
is about 10 days & two weeks
earlier than usual.

Film pack - $3\frac{1}{4} \times 4\frac{1}{4}$ - 60

Prints - 12 - " " 120

Frequent showers during
our stay in Jensen.

25
Thursday. Sept. 24. 1930.
Chuwa. Chosen.

Warm and clear.

Left Heigo 9.31 A.M.

Arrived Chuwa 10.03

Left Chuwa by bus 11.00 P.M.

Arr. Heigo 2.15 P.M.

In the morning left for Chuwa to see if we could find anyone harvesting in the Chuwa region. We called at the Chuwa market and were told that the farmers in the Sirogi region were harvesting beans and had brought them to the market day yesterday. However, this region is quite a distance from Chuwa and rather hard

To reach and the bus service is very poor.

We left Chuma and started thru the farming region toward Ikujo. We passed many excellent fields of beans but they will not be ready for harvest before two or three weeks. In many of the millet-sorghum fields, the sorghum though not mature were cut and the land being plowed and planted to wheat or barley. The land is ridged and the wheat & barley mixed with compost soil is dropped in the furrows in hills. A man with a basket in front of

him changing from the
shoulders, drops ^a hand-
full of the soil mixed
with the grain. During
next May, soy beans are
planted in hills on the
ridges between the grain
rows. ~~For~~

Mung beans are being
picked. The pods are
dried in the sun, flailed
when dry and then the
seed is spread on mats
and dried in the sun.

Seed of *Trifolium*
lupinaster and *micro-*
lespedeza were collected
along the way.

after returning to Heigo
we visited the market
place as this is Farmers'
market day. Nothing

new was observed
except shelled green
adzuki beans which
are cooked as green beans.
This is the first time we
have observed this prod-
uct in the orient. Red
peppers, Chinese cabbage,
sweet potatoes are now
coming on the market
in great abundance.
Several kinds of chestnut
were also noted.

Pitsuri-Korea.
Friday-Sept. 26, 1930.
Chuma-Heigo Chosen.

Warm and clear. In the morning left on the T. A. C. for Pitsuri to look up soybean harvesting. We got off at the Sengul factory farm and met the manager who advised us that a large field of soybeans was being harvested nearby. On our way we had noticed two fields of beans being harvested.

We went to the field pointed out to us by the manager and found 3 Korean men and one Korean woman. The plants fully mature were being harvested

with a short handled
short bladed sickle. The
plants were bent over
and broken rather
than cut. Still and
movie pictures were
taken of the harvesting
scenes. The plants were
placed in small bundles.
In a nearby field Korean
women were making
large bundles out of the
small shocks or bundles.
The bundles were to be
hauled in at once and
placed in stacks in the
farm yards to be cured
and threshed later.

We left this farm
and started on the main
road towards Heigo.
We saw many saytraw

millet fields being
plowed up and sown to
wheat. In the fields
were small piles of finely
pulverized compost
soil. On examining these
piles we found that wheat
had mixed in. The land
was thrown up in ridges
and the wheat was being
sown in the furrows.

A farmer with a basket
of the wheat soil mixture
hanging in front of him
was dropping handfuls
of the mixture about
10 inches apart. On look-
ing over some of the plants
it was found that from
8-12 grains of wheat were
dropped at each hill. After
the dropping of the soil
and grain, other Koreans

Came along and kicked
soil from the ridges over
the grain. Pictures were
taken of the dropping
of the grain, covering
and the soil grain
mixture.

In the spring about
the middle of May soy beans
are planted on the ridges
between the wheat rows.
Following the soy beans
the ground is left idle
the following winter. The
next spring, millet
and soy beans are sown
on a crop of buckwheat,
wing beans and adzuki
beans.

On a buckwheat,
adzuki bean and
wing bean field we

found three varieties
or strains of mums.

As we went down the
road, we met Mr. Lutz
with his Korean assistant
on their way to the Sugar
Beet Co.'s farm to purchase
sugar seed. We went along
with them and while
they were at the farm we
went to a nearby hill
section where we collected
seed of three grasses and
Lespedeza tomentosa.

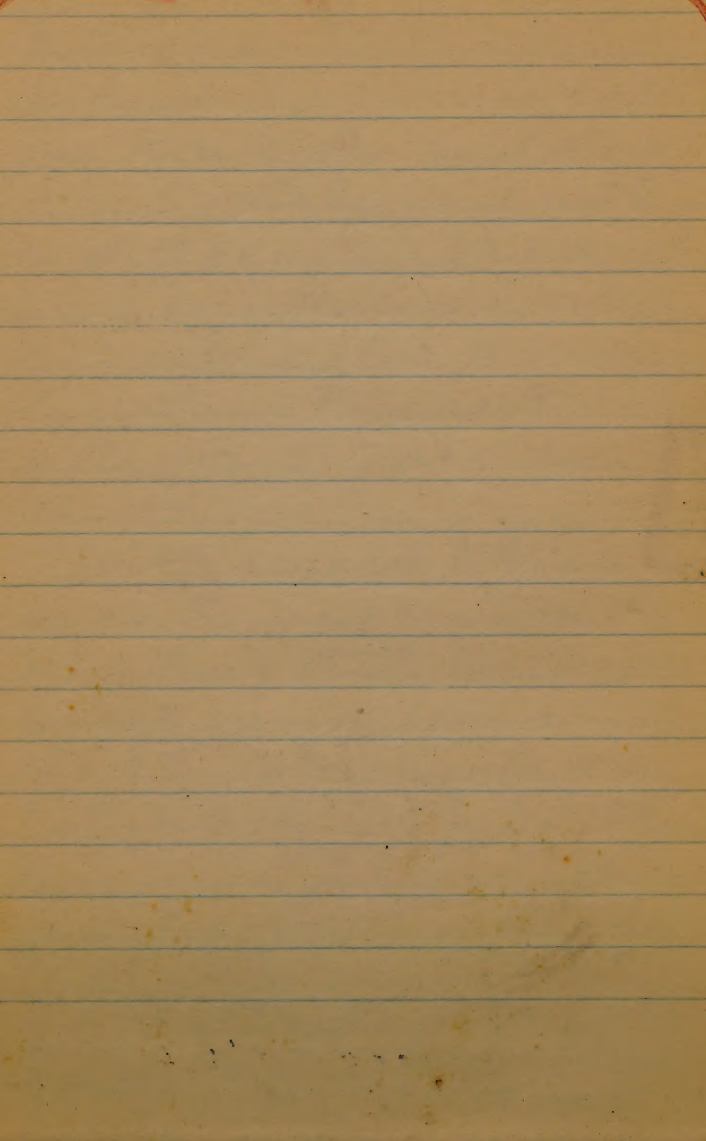
It was learned that
the Sugar Beet Co. had
decided not to farm
and is letting out the
farm to tenants this
coming year. The Co. is
selling its sheep for
25 yen per head.

The tunnel in the

Pituri section is considered the poorest soil in Korea. The soil is a red shale soil with a stiff clay subsoil and overlain with limestone. The average land in this section sells for 5-7 sen per tobo.

With regard to bean sprouts, we were told by Mr. Lutz that the Koreans used mung beans and soybeans sprouts very extensively. With soybeans they use the green seeded varieties for sprouts and the yellow seeded sorts for cattle feed. The sprouts are boiled and eaten with a

little vinegar. Mung
bean sprouts are used
more generally than the
soy bean. The beans are
sprouted in earthen
jars in the farm home.
such as one sees on the
market. These jars sell
for about 50 sen.



Saturday - Sept. 27, 1930
Heijo - Korea.

Cool and cloudy, During the early morning we had a thunder, lightning and rain, the worst we have experienced since we have been in the Orient.

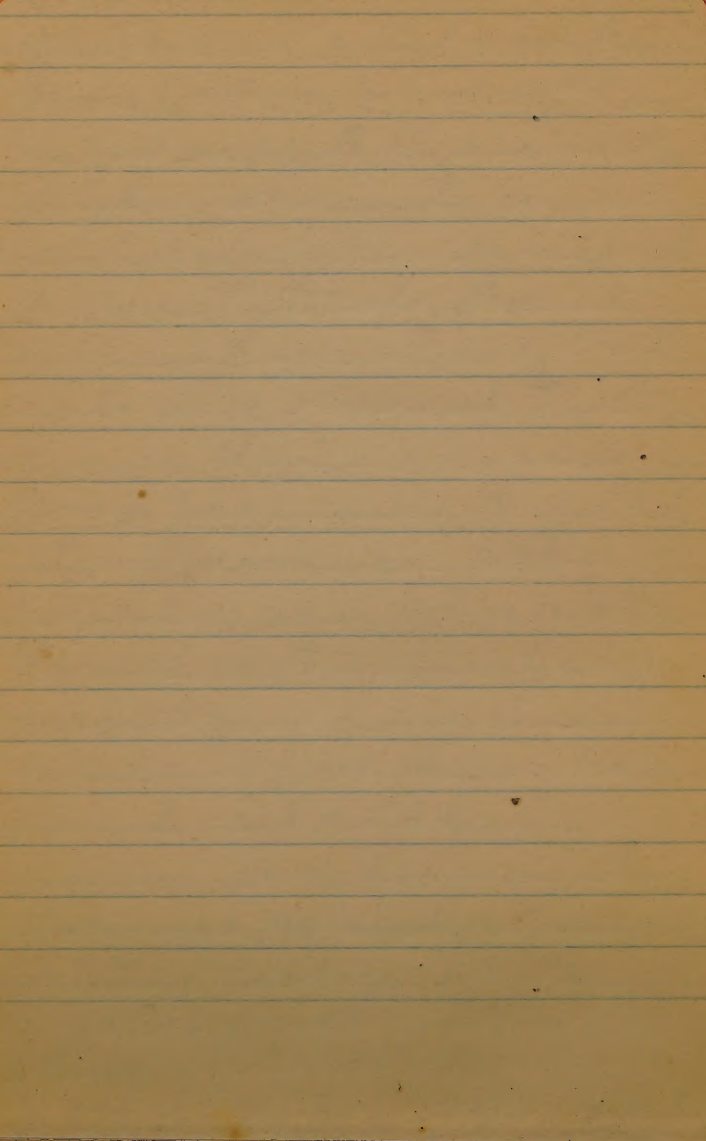
In the morning seed of the various legumes that having been drying out were threshed and cleaned.

Plant and seed material was packed in two parcel boxes for shipping to Sohin Building by express.

After lunch we went to the Saiduwon Gate where Korean Market day is being held. One of the most notable things was the amount of green shelled

soybeans and adzuki
beans soon being sold
as green vegetable beans.
Soybean sprouts were
noted in abundance at
different stands. Several
different varieties of chest-
nuts were observed. Full
grown Chinese cabbage is
now beginning to make
its appearance. Other
vegetables were to be seen,
Birdock root, spinach,
pickled young fern shoots,
boiled and fresh wing bean
sprouts, red and green
peppers, radishes, cucumbers,
turnips, squashes of many
varieties, cabbage, white
potatoes, sweet potatoes
(three or four varieties)
Cabbage, ginger roots, plants,

of green agile & very hard.



Sunday - Sept. 28, 1930.

En Route -

Heigo, Chosen - Mukden, Manchuria

Tax - & station

Film pack developing 60

12 prints 120

In the morning spent
time in packing trunks.

Mr. Sugitake went early to
the Botani section and
collected seed of six grasses
and *Lespedeza curvata*.

Left Heigo, Chosen 3.18 P.M.

Arr. Antung, Manchuria, 7.45 P.M.

R.R. fare Heigo - Dairen (2)

Exp. " Heigo - Mukden (2)

Sleeper Heigo - Mukden (2) 4.50

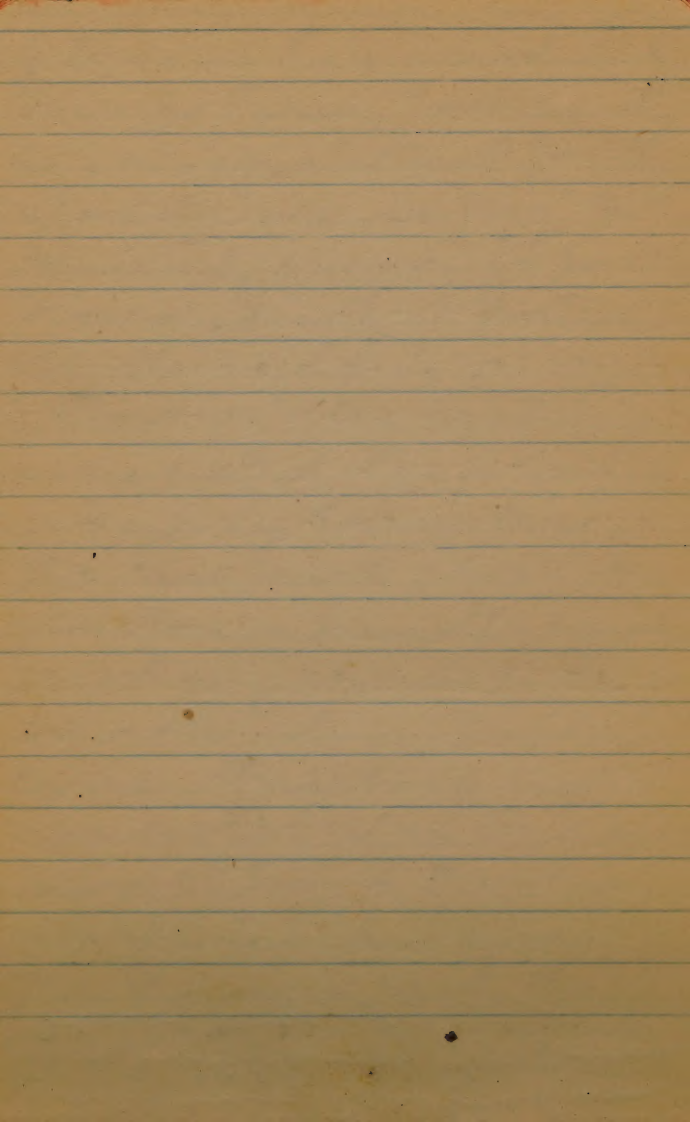
Transfer trunk 3.00

At Teishen there is a Seed
and Nursery Farm for the
Heian Hokkaido Prefecture.
Each of the 13 prefectures

of Chosen has a seed and
Nursery Farm. Each county
has an agricultural society.

Partly rice is very ex-
tensively grown in North
Korea, South of Urtan
to Shingtsu very
extensive rice sections
were noted. The farmers
were busy harvesting
the rice and place the
plants in bundles and
making shocks of the
bundles. In a few
cases, threshing rice
was noted. In two cases
small hand threshing
machines were seen.
For the most part the
rice was being hauled
in by ox carts or on the
backs of men but in

a few cases the rice
was being threshed in
the field and the grain
being bagged.



29
~~S~~Monday - Sept. 30. 1936.

Mat Len - Manchuria.

~~Enter notes~~ 4 4.05

Arrived Mukden - 6.20 AM

Left Mukden - 3.58 P.M.

Arr. Kaiyuan - 5.30 P.M.

Awoke about 5 A.M. and
in looking out saw the
farmers busy in the fields.
It looks as though most
of the crops had been harvested.
Some few fields of soy-
beans were being harvested,
and in some cases the
plants were being loaded
on large carts. The methods
of working are much
different than in China.
In many of the fields
the soy beans were
laying out in small
branches while in
other fields, small

Holten Shrubbery.

No. 6 Nanivatoke, Mukden,
Manchuria.

Importer & Exporter.

Handle become seed
grown in Shantung Province,
China, grown in north
Manchuria. Seed sells
for 80 sen per kin (13 lbs).
Can collect seed of wild
legumes if a list is
given of those desired.

Bundles have stacked
loosely in small shocks
to allow air to circulate
about each bundle.

Each bundle seemed
to have 12-15 plants,
and 6-8 bundles per
shock. N. on chosen

the plants are cut
one day, and on the
next day, the plants are
bundled and tied and
hauled to the farm yard.

It was noted that
The haying and the
millet were cut, bundled
and the bundles set
up in the same
manner to cure as the
soybeans.

We arrived at Mukden
at 6.20 A. M. and after
breakfast at the Railroad
Sta., Hotel lunch room, we
went to the Hotel Shueyoen
to see the proprietor regarding
the collection of wild legume
seed. If a list is submitted
in time, he would be glad
to collect wild legume

seed in Manchuria. A sample green seed of alfalfa from Shangtung Province just received was given us. The firm has 500 lbs. of seed left over from last season. Many calls are for alfalfa seed are received from farmers in north Manchuria.

After our visit to the seed collector, we went on by tasha to the Ancient Tombs of the Chinese Emperors about 2 miles from the Ry. Sta. Here we saw some very beautiful temples and mansions. Several pictures were taken of the different buildings.

we left on the 3.58
P.M. train for Kaiyuan.
From Mukden to
Kaiyuan in many sections
the crops for the most part
had been harvested. Some
bean fields were being har-
vested but for the most
part had been harvested
and were in small
shocks. In some sections
the beans had been
entirely taken from the
fields, and in a few
sections the beans were
being loaded on carts or
being hauled in. In
many cases the plants
had been cut before all
of the leaves had fallen.

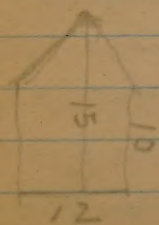
Tuesday-Sept. 30, 1930.

Kaiyuan, Manchuria.

Cloudy and cool. Rained very hard during the night and early morning. Sprinkled up to about 10 A.M.

Mr. Kofuka, director of the S. M. Ry. Soybean Seed Farm here called shortly after nine. He advised that most of the soybeans have been harvested in the Kaiyuan section although there are a few fields here and there not yet harvested. The beans have been harvested for the most part during the past two weeks. After the beans are all cut, they are tied in

bundles with a binding
stem. The bean bundles
are placed in loose
stacks and left to cure
in the fields for about
a week. The bundles are
then baled and
placed in large round
pointed stacks along the
side of the outside threshing
floor. The stacks are about
15 ft. high about 12 feet in
diameter. The soy beans
are threshed 1/20.



The plants are
placed on the
dirt threshing
floor and the
threshing done by stone
rollers drawn by
burrums. After the
threshing of the soy-

beans, the hooling heads are threshed out in the same manner. After the hooling the millet is threshed out. In Manchuria the entire millet plant is placed on the threshing floor the heads of the millet plants placed toward the center.

On one farm, we found a large quantity of bundles of plants of soy beans that had been cut before fully mature, many of the leaves still being on. The farmer advised us that they had been planted late and that he had to cut them when he cut the mature ones otherwise

They would be stolen
if left in the field to
fully mature.

We were taken to the
Stock Exchange Bldg. which
is controlled by the Japanese
Kwangtung Government.
Each member of the stock
exchange has to deposit
2000 yen. This is said to
be done to insure honest
dealing on the part of the
broker. A publication
giving the annual report
of last year's business was
given us. ^{had interest} further

After lunch, Mr. Kofuka
took us out in the country
to look over the crops.
a few fields of soybeans
were found as yet not
harvested. In one field

Many plants were noted
of the Virginia type but
with a medium small
oblong greenish yellow seed.
The plants are very prolific
and of a good forage type.
The crops for the most part
had been hauled in. The
soybeans, millet and
kashang are left in the
field bundled & shocked
about a week after being
cut. The entire plants of
millet and soybeans
are stacked around the
outdoor threshing floor
while the heads of the
kashang are cut off. In
threshing the entire
plants of soybeans and
millet are threshed by
stone rollers.

at the present time

Mr. [] of the Stocks
exchange advised that
very few new soybeans
have been brought on the
market, and trade has
been with the 1929 crop
of which there are large
quantities in the hands
of Chinese merchants.
Soybeans are bringing
at the present time 1.79
yen per half bushel and
the new crop slightly
more than this. The de-
mand for oil cake is
very dull and has been
so for some time.

Mr. Kufuka advised that
the Chinese use vegetable
(green) soybeans to some
extent. Early in the fall

green soybeans are
shelled and then
pickled in jars in
the same manner as
we pickle as salt cu-
cumbers. The pickled
beans are used mixed
in various vegetable
dishes.

Movie and still
pictures were taken of
the stacking of soybean
and kaoliang heads.

87

3 1/4 x 4 1/4

Aug. negatives ——— 34

Sept 1-15 " " ———

Panor

3 - 100 -

9 - 10 -

2 - 10 -

2 - 10 -

2 - 10 -

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3-Termin - " 9/28
 10 man Unten - " 9/28
 2. Unten - oben - 9/28
 Paru

